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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/740,207 | 12/18/2003 | Kleomenis Barlos | 21526 | 2134 |
| 151 | 7590 | 11/03/2006 | | |
| | | | EXAMINER | |
| | | | PRICE, ELVIS O | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1621 | |

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/740,207 | BARLOS ET AL. | |
| | Examiner | Art Unit | |
| | Elvis O. Price | 1621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 September 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2 and 4-9 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1, 2 and 4-9 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claims 1, 2, and 4-9 are pending in the application.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/25/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harre et al. {Reactive & functional Polymers 41 (1999), pp. 111-114}.

Applicants claim a process for preparing solid phase bonded 2-chlorotrityl chloride of formula I, in the presence of HCl and an organic solvent.

Harre et al. teach a process for preparing solid phase bonded 2-chlorotrityl chloride, comprising reacting solid phase bonded hydroxylated 2-chlorotrityl in the presence of a chlorination agent (thionyl chloride) and an organic solvent (methylene chloride) (see section 2.2 and 4.1). The difference between the presently claimed invention and what is taught by the Harre et al. reference is that Harre et al. do not

teach HCl as a chlorinating agent, the use of other solvent (such as dioxane) besides methylene chloride and reaction times from 6 to 96 hours.

However, the use of any chlorination agent, solvent and reaction time would have been obvious, absent any unexpected results, to one having ordinary skill in the art.

One having ordinary skill in the art would have been motivated to experiment with different solvents, chlorinating agents and reaction times (depending on cost and availability of such reagents) so as to arrive at optimum results or at the very least arrive at other art recognizable alternative means of preparing the said solid phase bonded 2-chlorotriyl chloride of formula I. The presently claimed invention would have been therefore obvious to one having ordinary skill in the art.

Response to Arguments

Applicants' arguments filed 9/25/06 have been fully considered but they are not persuasive.

Applicants argue the following:

"Applicants' claims, as amended; claim a selection invention comprising a process for regenerating 2-chlorotriyl chloride resins by utilizing an HCl chlorinating agent inorganic solvent. The Harre et al. reference does not teach such a process, but rather discloses the use of thionyl chloride as the regenerating chlorinating agent. Moreover, Harre is completely non-informative as to how effective the thionyl chloride is as a chlorinating agent since Harre fails to disclose the active Cl content of the resin before use. Harre only teaches that an active Cl content of 1.6 mmol/g is achieved after a one hour treatment. By contrast, applicants' extensive work with several chlorinating systems includes disclosure showing the effectiveness of the same system as Harre (thionyl chloride in methylene chloride). As shown in Table I of applicants' specification, when recycling virgin resin with a starting active Cl content of 1.27 mol/kg (mmol/g) in

methylene chloride, even for 65 hours at 40°C, only 0.97 mol/kg (mmol/g) active Cl is achieved. This 76% effectiveness is to be contrasted with the near 100% effectiveness of applicants' system.

It begs the proper legal question of patentability to simply suggest that a skilled worker in the art could also have explored different chlorinating systems to find one which is optimal. That was the effort made by applicants. Thus, applicants explored different chlorinating systems and discovered that HCl was an optimal chlorinating agent over others by examining its performance as against others. HCl was found by applicants to provide repeatable recycling effectiveness of near 100%, while the other systems had inferior effectiveness in one regard or another. Thus, for example, while PCI5 could also achieve high Cl loading, it is such an aggressive reagent that it degrades the resin structure and makes repeated recycling unfeasible. Only HCl was found to be both optimally effective as to HCl loading while also being gentle enough to permit repeated recycling."

This argument is not convincing. Although the Harre et al. reference does not teach HCl as the chlorinating agent, it is well known in the art, to those having ordinary skill in the art, that HCl can be utilized as a chlorinating agent. Applicants continue to argue that the recycled resin has an unexpectedly high active chlorine content when HCl is utilized as the chlorinating agent. However, the Examiner finds no support for such an assertion when considering that applicants' examples in the present specification (see Table 1 also) is not a true side by side comparison of an HCl chlorinating agent versus other chlorinating agents (especially thionyl chloride) in that the solvent and amount of chlorinating agent used for the HCl experiments are different from those used for the experiments where other chlorinating agents are utilized. Additionally, applicants' comparative examples are not commensurate in scope with the broader invention as defined by claim 1, wherein the reaction is carried out in the presence of HCl and an organic solvent. Applicants' HCl/solvent examples point only to dioxane and THF as potential organic solvents, used with HCl, which allow for an unexpected finding.

Art Unit: 1621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 571 272-0644. The examiner can normally be reached on 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elvis O. Price

A handwritten signature in black ink, appearing to read "Elvis O. Price".